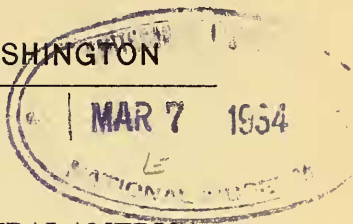


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THE SPOTTED ROCK WRENS OF CENTRAL AMERICA.¹

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The uncertainty which has existed in regard to the relationships of the three described forms of the '*guttatus*' group of rock wrens has been largely due to the lack of typical specimens of *Salpinctes guttatus* Salvin and Godman in this country. During a recent field trip to Salvador, an adequate series of topotypes of this species was secured on Volcan San Miguel, and the writers are thus enabled to clear up some of the points involved. In this connection we have been privileged to examine practically all of the specimens of this group available in this country. Unfortunately all of these birds are not strictly comparable in age and plumage, but specimens are at hand from all the general area known to be occupied by the group. The material is as follows: one adult from Joyabaj, Quiché, Guatemala; 24 adults and 20 juveniles from Salvador; 6 juveniles from Volcan El Viejo, Nicaragua; and 5 adults and 5 juveniles from Volcan Miravalles, Costa Rica. We are indebted to the authorities of the American Museum, the Carnegie Museum, the Museum of Comparative Zoology, and the United States National Museum, for the comparative material necessary for this study.

The series of 17 adult topotypes of *guttatus* from Volcan San Miguel, Salvador, exhibits an extraordinary variation in the density and shape of the markings of the under parts. The birds vary from a lightly marked extreme, with narrow and diffused streaking on chin and throat, and with the spotting on chest and barring on flanks greatly reduced, to a type in which the bold blackish maculations almost obscure the ground color. Some individuals are prominently and conspicuously barred on

¹Contribution from the California Institute of Technology.

the flanks, while in others the spotting extends back to the under tail coverts. There is also much variation in ground color, irrespective of density of marking. Some birds have strongly brownish flanks and a decided buffy tone in the whole posterior under parts, while others are grayish-white with only a slight pinkish tinge on the flanks. As an average thing, the females are much less heavily marked than the males. But this distinction between the sexes is only relative, for some females are more heavily marked than the average of the males. Our series of 7 adults from Volcan Conchagua, and Colinas de Jucuaran, Salvador, are slightly whiter as to ground color, with fainter markings below, as average characters. However, this difference is so slight as to be almost negligible, and every individual can be matched from the San Miguel series. The single available adult female from Quiché, Guatemala, No. 150,905, U. S. National Museum, is one of the two specimens upon which Mr. Ridgway based his *Salpinctes maculatus*. This specimen is exactly duplicated by No. 17,598 of the Dickey collection from Volcan San Miguel, Salvador, save that the latter is very slightly darker dorsally. There are, however, other San Miguel birds which are paler, and others which are darker in this respect. Dr. Alexander Wetmore has kindly compared the type of *maculatus* with selected specimens of *guttatus* from San Miguel and Conchagua, and believes them identical. We had reached the same conclusion, after comparing the above topotype of *maculatus* with our topotype series of *guttatus*. On the basis of available material it would therefore seem best to consider *maculatus* a synonym of *guttatus*. On the other hand, a fully representative series of *maculatus* might well disclose mass variation in the direction of the 'obsoletus' group. The 5 adults we have seen from Volcan Miravalles, Costa Rica, are in such excessively abraded plumage as to be worthless for comparison purposes.

Turning now to the juveniles, it is found that 10 birds from Volcan San Miguel, Salvador, in freshly acquired plumage, are very much darker, more sooty (less brownish), and more coarsely variegated dorsally, than comparable Nicaraguan and Costa Rican juveniles. The 10 juveniles from Conchagua and Jucuaran, Salvador, are in worn, faded plumage and therefore paler than those from San Miguel, but the backs are just as coarsely variegated and, like the adults, there can be no doubt but that they are quite typical of *guttatus*. For the Nicaraguan birds the name *Salpinctes fasciatus* Salvin and Godman is, of course, available. The differences, though pronounced, are fully bridged by individual variation, and the race should therefore stand as *Salpinctes guttatus fasciatus*. In mass, the Costa Rican birds are even paler than the Nicaraguan series, but they are so close to the latter that we hesitate to give them a name.

In conclusion we wish again to emphasize that fresh, comparable specimens may not only show *maculatus* to be a valid race, but may also justify the separation of the Costa Rican bird. The above arrangement is admittedly tentative, for our present understanding of the group is based on material which is in some ways still too scanty to be entirely satisfactory.

The group nomenclature and ranges, as here revised, are as follows:

Salpinctes guttatus guttatus Salvin and Godman.

SALVADOR SPOTTED ROCK WREN.

Salpinctes obsoletus (not *Troglodytes obsoleta* Say) Salvin and Godman, Biol. Centr.-Amer., Aves, I, 1880, p. 71, part (Volcan Conchagua, Salvador, alt. 4,000 feet).

Salpinctes guttatus Salvin and Godman, Ibis, 6th ser., 3, Oct. 1891, 609 (Volcan San Miguel, Salvador, alt. 4,000 feet).—Ridgway, Bull. 50, U. S. Nat. Mus., pt. 3, 1904, p. 653, part (Volcan San Miguel; Volcan Conchagua?).

Salpinctes maculatus Ridgway, Proc. Biol. Soc. Wash., 16, Nov. 30, 1903, p. 169 (Toyabaj [=Joyabaj], Quiché, Guatemala).—Bull. 50, U. S. Nat. Mus., pt. 3, 1904, 651 (crit.).

Range.—Rocky highlands from north-central Guatemala (Joyabaj, Department of Quiché), south to Salvador (Volcan San Miguel; Colinas de Jucuaran; Volcan Conchagua).

Salpinctes guttatus fasciatus Salvin and Godman.

NICARAGUA SPOTTED ROCK WREN.

Salpinctes fasciatus Salvin and Godman, Ibis, 6th ser., 3, Oct. 1891, p. 610 (Volcan El Viejo, Nicaragua, alt. 6,500 feet).—Ridgway, Bull. 50, U. S. Nat. Mus., pt. 3, 1904, p. 653 (Volcan El Viejo).

Salpinctes guttatus (not of Salvin and Godman) Underwood, Ibis, 1896, p. 433 (Miravalles, Costa Rica).—Ridgway, Bull. 50, U. S. Nat. Mus., pt. 3, 1904, p. 653, part (Volcan Miravalles).—Carriker, Birds of Costa Rica, 1910, p. 754 (Volcan Miravalles, alt. 2,000 feet).

Range.—Northwestern Nicaragua (Volcan El Viejo, Department of Chinandega), south to northwestern Costa Rica (Volcan Miravalles, Department of Guanacaste).